

REMARKS

The present invention relates to a lamp assembly used in water treatment. Specifically, the invention aims to place the warm-up components of the ballast in the immediate vicinity of the lamps and placing the operational components of the ballast a remote distance from the lamps. This spacing eliminates the need for protective coverings over the operational components that would be needed if these components were disposed near the water.

The Examiner rejected claims 12, 13, 15-22, 24-26 and 29 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent Publication No. 2003/0015478 (hereinafter "Kuennen") and maintains that Kuennen renders claims 14, 23, 27, 28 obvious under § 103. However, Kuennen discloses a water treatment system enclosed in a housing for home or office use. All of the components in Kuennen are disposed very close to the lamps and the water. Nothing in Kuennen suggests placing the operational components remotely from the lamps.

In particular, independent claim 12 includes "a second electrical circuit disposed remotely from the discharge lamps." The Examiner cites Kuennen's resonant lamp circuit 152 as "a second electrical circuit disposed remotely from the discharge lamps." Office Action, p. 2. Applicant respectfully disagrees. As shown in Figures 4 and 6, resonant lamp circuit 152 is not disposed remotely from the lamps bulbs 300 and 302. In fact, resonant lamp circuit 152 is disposed in the UV lamp assembly 14 and adjacent to the lamp bulbs 300 and 302. As shown in Figure 2, the entire UV assembly 14 is enclosed in enclosure 64. Applicants' invention requires the second circuit to be disposed remotely from the lamps so that a protective covering is not needed. Accordingly, Kuennen cannot anticipate claim 12, requiring a second electrical circuit disposed remotely from the discharge lamps. For at least this reason, Kuennen does not anticipate claim 12 or any of its corresponding dependent claims.

Similarly, independent claim 21 requires a "second electrical circuit disposed remotely from the discharge lamps." Independent claim 25 requires "a second electrical circuit" wherein

the distance between the second electrical circuit and the ultraviolet discharge lamps is greater than the distance between the first electrical circuit and the ultraviolet discharge lamps. For reasons substantially similar to those above, Kuennen does not anticipate independent claims 21 and 25 or any of their corresponding dependent claims.

Since Kuennen does not disclose the above limitations, it cannot anticipate any of the pending claims. In addition, for reasons similar to those above, Kuennen cannot support an obviousness rejection against claims 14, 23, 27 and 28.

Claims pending refer to the first electrical circuit being less than 0.5 meters from the discharge lamps and the second electrical circuit being greater than two meters from the discharge lamp. The Patent Office maintains that no patentable weight is given to these limitations "since it has been held that location of parts of an invention is a matter of obvious design choice and it involves only routine skill in the art." Office Action p. 6. Respectfully, Applicant disagrees. Such a configuration reduces the number of connectors between the ballast and the lamp and thus, reduces the impedance of the wiring for equivalent links without it being necessary to make the ballast or an electrical cabinet containing the ballast waterproof. This approach also reduces lamp power supply asymmetries due to parasite capacitance.

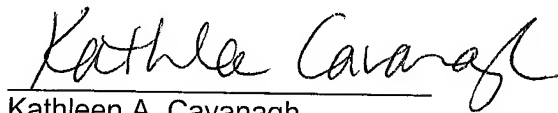
Also, the claims require that the first electrical circuit control a warm-up phase of the discharge lamps. See, for example, claim 12. The Examiner cites to paragraph 77 in Kuennen and to the starter circuit disclosed therein. However, it is not apparent that the Kuennen starter circuit controls a warm-up phase for the lights. As set forth in paragraph 77, Kuennen states that the starter circuit 314 is designed to short filaments 304, 306 during start-up to cause maximum pre-heat of the bulbs 300, 302. This allows the ultraviolet lamp 60 to strike maximum dispersion of the mercury in the bulbs 300, 302, thereby causing maximum intensity and delivering the highest dose of ultraviolet light to the water as it passes through the ultraviolet lamp assembly 14. Kuennen goes on to state that the starter circuit is designed so that the

ultraviolet lamp 60 instantly turns on at a maximum intensity. That does not appear to be a warm-up phase.

For the foregoing reasons it is respectfully urged that the present application is in condition for allowance and allowance is requested.

Respectfully submitted,

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